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ABSTRACT OF THE DISCLOSURE

An apparatus and a method as well as a storage device of the present invention transform intensity levels with consideration of both features of the intensity levels in an input image and human visual characteristics, wherein the present invention includes the steps of inputting wider dynamic range digital image data, generating a histogram of intensity levels of the image data, generating a histogram equalization LUT by cumulating the histogram, generating a visual characteristics LUT with reference to the histogram equalization LUT, generating a combined LUT by combining the histogram equalization LUT and the visual characteristics LUT, and correcting the image data.